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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/656,364 | 09/06/2000 | Alice C. Martino | 6107.N CN2 | 3730 |

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| EXAMINER | |
|---|---|
| SHAREH, SHAHNAM J | |
| **ART UNIT** | **PAPER NUMBER** |
| 1617 | |

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/656,364 | MARTINO ET AL. | |
| | Examiner | Art Unit | |
| | Shahnam Sharareh | 1617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *2-20,22-24,26,34,36-38,68 and 69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-20, 22-24, 26, 34, 36-38, 68-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

Amendment filed on November 26, 2003 has been entered. Claims 2-20, 22-24, 26, 34, 36-38, 68-69 are pending. Any rejection previously on record that is not addressed in this Office Action is considered obviated in view of the amendments.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

Claims 2-20, 22-24, 26, 34, 36-38, 68-69 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for formulations wherein the active ingredient is recited in claim 38, does not reasonably provide enablement for "rapidly precipitating drug which is a fairly soluble or highly soluble salt form of a poorly soluble free base or free acid that is prone to supersaturation when introduced in water or simulated physiological fluid at body temperature and more than 90% of it precipitates out within 60 min after coming into contact with said water or simulated physiological fluid at body temperature." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The factors that are to be considered in determining whether a disclosure would require undue experimentation are set forth *in In re Wands*, 858, F.2d 731, 736-40 (Fed. Cir. 1988). Accordingly, they include

1. The quantity of experimentation necessary

2. The amount of direction or guidance presented
3. The presence or absence of working examples
4. The nature of the invention
5. The state of the prior art
6. The relative skill of those in the art
7. The predictability or unpredictability of the art, and
8. The breadth of the claims.

However, these factors are illustrative, not mandatory and what is relevant depends on the specific facts. All of these factors need not be reviewed when determining whether a disclosure is enabling. *Id.*

The instant claims merely calls for the use of a trial and error to attempt to find a compound that will perform the recited limitation. The instant specification first fails to identify any commonality in the mechanism of action, their structure activity relationships, or even their chemical structures. Even though the specification may provide for certain exemplary drugs from the group of compounds identified as rapidly precipitating drugs, it does not provide necessary link between finding a particular compound or narrowing the range of candidates in order to find the suitable compounds without the need for undue experimentation.

Second, even though the level of ordinary skill in the art may allow practice of the assays to test compounds having the potential properties claimed, aside from the compounds recited in claim 38, no where in the specification provides any guidance to select compounds that are likely to be of use in practicing the claimed invention. Rather,

the specification relies on hypothetical level of ordinary skill in the art to supply the missing information by conducting an assay to identify the rapidly precipitating drug instantly claimed. Given the broad breadth of the claims the ordinary skill in the art would not have any guidance as what type of compounds should he proceed with and thus would be not be in proper notice of the scope of the pending claims.

Further, as it has repeatedly been stressed by the Courts, an assay for determining whether a given compound possesses certain desired characteristics and identifies some broad categories of compound that might work, without more precise guidelines, amount to little more that "a starting point, a direction for further research." See *Genetech v. Novo Nordisk A/S,* 108 F.3d 1361,1366,(Fed. Cir.), also *Enzo Biochem, Inc. V. Calgene*, Inc, 1888 F.3d 1362, 1374 (Fed. Cir. 1999).
In the instant case, the specification primarily directed ordinary artisan to compositions of delavirdine and potentially other listed compounds recited at page 4 of the specification. Thus, similar to the cases above, the instant claims appear to place a function at the point of novelty by identifying a compound that possesses certain desired characteristic. As has been reasoned in cited cases, such attempt does not satisfy the statutory requirement set forth under 112 1$^{st}$ para.

The instant claims do not provide adequate guidance as to compounds employed, nature of therapeutic activity, commonality of mechanism or action or their structural activity relationships, and further fail to provide notice for those practicing in the art about the limits of protection instantly sought. Rather, they simply appear to be

an invitation to experiment. Thus, practicing the entire scope of the instant claims require undue experimentation.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-20, 22-24, 26, 34, 36-38, 68-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makooi-Morehead US Patent 6,238,695 in view of Elger to the extent they read on claim 38.

Makooi-Morehead shows that the use of lactose; a flow agent such as colloidal silicon dioxide; a superdisintegrants such as croscarmellose and sodium glycolate, and a binder such as microcrystalline are well established in the art. Makooi teaches that such combination of ingredients improves the rate of dissolution and thus the extent of absorption in the GI-track. (col 2, lines 3-7). Accordingly utilizing them and further optimizing their concentrations for desired rate and extent of absorption is well within purview of an ordinary artisan (see col 5, line 40-col 6, line16; col 7, line15-col 8, line33). Makooi also provides the use of compounds that are highly insoluble in water. (col 1, line 63-col 2, line 5).

Elger's teachings are discussed extensively on the record. Elger provides for various types of drugs within the scope of the instant claim 38 that are highly insoluble in water. Such drugs include diphenhydramine, clindamycin, etc... (see entire col 2).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to substitute Makooi-Morehead's drug with other suitable insoluble agents as

recited in Elger, because as taught by Makooi-Morehead, the ordinary artisan would have had a reasonable expectation of success in improving the rate of dissolution of a insoluble drug and subsequently its extent of absorption in GI track.

***Response to Arguments***

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection. However, Examiner would like to point out that certain line of reasoning were not commensurate with the scope of pending claims. For example, the use of lubricant in the instant generic claims is in amounts "up to 5 %." This amount includes 0% - 5%. Therefore, Eldger's lack of using lubricants still fall within the scope of the pending claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahnam Sharareh whose telephone number is 571-272-0630. The examiner can normally be reached on 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan, PhD can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

RUSSELL TRAVERS
PRIMARY EXAMINER
GROUP 1200

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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